

# MISSOULA FIRE WEATHER 2005



## 2005 CHANGES TO THE MISSOULA FIRE WEATHER ANNUAL OPERATING PLAN

Following is a list of changes to Missoula's section of the National Weather Service Northern Rockies Annual Fire Weather Operating Plan.

- Headlines in the Public Forecast will not be included in the Fire Weather Planning Forecast...or vice versa.
- Mixing heights and Transport Winds in the Fire Weather Planning Forecast have been replaced with the [Experimental Clearing Index](#) graphic. However...Mixing Heights and Transport Winds will continue to be optional elements in the Spot Forecast Request.
- The 8 to 10-day Outlook has been removed from the Fire Weather Planning Forecast.
- [Red Flag Warning Criteria](#) has changed to remove the "High" Fire Danger category as an element of consideration. Criteria now reads:

"One, or a combination of the following conditions, in conjunction with Very High, or Extreme Fire Dangers, will be considered for Red Flag events..."

# MISSOULA FIRE WEATHER 2005

## Location

The National Weather Service Office in Missoula is located at the Aerial Fire Depot, 5765 Highway 10 West, 1/4 mile west of the Missoula International Airport. The mailing address is:

**National Weather Service  
P.O. Box 9350  
Missoula, MT 59807**

## Phone Numbers

**Fire Weather desk:** (406) 329-4716  
**Office:** (406) 329-4715/4840  
**FAX:** (406) 329-4842

## Contacts

### Administrative

Bruce Bauck  
Meteorologist in Charge  
[bruce.bauck@noaa.gov](mailto:bruce.bauck@noaa.gov)

Marty Whitmore  
Fire Wx Program Manager  
[marty.whitmore@noaa.gov](mailto:marty.whitmore@noaa.gov)

Crystal Lake  
Fire Weather Assistant  
[crystal.lake@noaa.gov](mailto:crystal.lake@noaa.gov)

### IMETs

Bob Nester  
Incident Meteorologist  
[robert.nester@noaa.gov](mailto:robert.nester@noaa.gov)

Bryan Henry  
Incident Meteorologist  
[bryan.henry@noaa.gov](mailto:bryan.henry@noaa.gov)

Patrick Gilchrist  
Incident Meteorologist Trainee  
[patrick.gilchrist@noaa.gov](mailto:patrick.gilchrist@noaa.gov)

**Internet Address**      <http://weather.gov/missoula>

**Operational Hours** Twenty-four hour service is provided for routine and special fire weather products.

## Training Provided

Missoula Fire Weather Forecasters are available for training courses, workshops, seminars and other meetings requiring meteorological expertise. Training includes local and Regional courses such as S-290 and S-390, as well as pre-season refreshers for Hotshot crews, Smokejumpers, general firefighters and lookout personnel, etc. Per Diem and travel costs will be paid for by the requesting agency, as outlined in the National Agreement for Meteorological Services. Please give as much advance notification as possible to ensure the availability of a forecaster.

All Training requests should go through the Fire Weather Program Manager, Marty Whitmore.

e-mail [Marty.Whitmore@noaa.gov](mailto:Marty.Whitmore@noaa.gov)  
and cc: [Crystal.Lake@noaa.gov](mailto:Crystal.Lake@noaa.gov)  
or phone 406-329-4715

## Agencies Served

USDA Forest Service	Lolo NF, Kootenai NF, Flathead NF, Beaverhead/Deerlodge NF, Helena NF, Clearwater/Nezperce NF, Bitterroot NF, Northern Rockies Coordination Center (NRCC)
Bureau of Land Mgmt	BLM-Idaho, BLM-Montana
Bureau of Indian Affairs	Nez Perce Tribe of Idaho Confederated Salish and Kootenai Tribe
Fish & Wildlife Service	FWS-Montana, FWS-Idaho
National Park Service	Glacier NP
Counties (Montana)	Beaverhead, Deer Lodge, Flathead, Granite, Lake, Lincoln, Mineral, Missoula, Powell, Ravalli, Sanders, Silverbow, Glacier
Counties (Idaho)	Clearwater, Idaho, Lewis, Nez Perce, Latah
State of Montana	Department of Natural Resources and Conservation
State of Idaho	Idaho Department of Lands

## Agency Contacts

### USFS Forest Dispatchers

Forest	Phone
<a href="#">Beaverhead/Deerlodge</a>	406-683-3975
<a href="#">Bitterroot</a>	406-363-7133
<a href="#">Clearwater/ Nezperce</a>	208-983-4060/4061
<a href="#">Flathead</a>	406-758-5260-6486
<a href="#">Kootenai</a>	406-283-1586/7740
<a href="#">Lolo</a>	406-829-7070/7050

### USFS Forest/District Fire Management Offices

Forest	City/State	Phone
<a href="#">Beaverhead/Deerlodge</a>  Dillon District Wise river/Wisdom District Sheridan/Madison District Jefferson/Butte District Phillipsburg/Deerlodge District	Dillon, MT Dillon, MT Wisdom, MT Ennis, MT Whitehall, MT Phillipsburg, MT	406-683-3990  406-683-3969 406-689-3243 406-682-4253 406-287-3223 406-859-3211
<a href="#">Bitterroot</a>  Stevensville District Darby District Sula District West Fork District	Hamilton, MT Stevensville, MT Darby, MT Sula, MT Darby, MT	406-363-7135  406-777-2288/5461 406-821-4258/3913 406-821-2325/3201 406-821-1230/3269
Clearwater/Nezperce  Clearwater NF Palouse District North Fork District Lochsa District Powell District Nezperce NF Slate Creek/Salmon River District Clearwater District Elk City/Red River District Moose Creek District	Grangeville, ID  Potlatch, ID Orofino, ID Kooskia, ID Powell, ID Slate Creek, ID Grangeville, ID Elk City, ID Fenn, ID	208-983-4066  208-875-1131 208-476-4541 208-926-4274 208-942-3113 208-839-2211 208-839-1963 208-842-2245 208-926-4258
<a href="#">Flathead</a>  Swan Lake District Hungry Horse/Glacier View/ Three Forks District Spotted Bear District Tally Lake District	Kalispell, MT Big Fork , MT Hungry Horse, MT Hungry Horse, MT Whitefish, MT	406-758-5261  406-837-7527 406-387-3834 406-758-5376 406-863-5427

<a href="#">Kootenai</a>	Libby, MT	406-283-7733
Rexford District	Eureka, MT	406-296-7173
Fortine District	Fortine, MT	406-882-8328
Three Rivers District	Troy, MT	406-295-7486
Libby District	Libby, MT	406-283-7551
Cabinet District	Trout Creek, MT	406-827-0712
<a href="#">Lolo</a>	Missoula, MT	406-329-1089
Missoula District	Missoula, MT	406-329-3852
Ninemile District	Huson, MT	406-626-5422
Seeley Lake District	Seeley Lake, MT	406-677-3915
Superior District	Superior, MT	406-822-3952
Thompson Falls/Plains District	Plains, MT	406-826-4340

#### USFS R-1 Regional Office

Agency	Name	Phone
<a href="#">Northern Rockies Coordination Center (NRCC)</a>		329-4880
Regional Coordinator	Kathy Elzig	329-4708
Intelligence	Colleen Finneman	329-4886
<a href="#">Fire and Aviation Management</a>		329-3402
Northern Rockies Operations	Bob Gilman	329-4961
Director of Fire and Aviation Management	Vacant	329-3402
Assistant Director of Fire and Aviation Management	George Weldon	329-3296
Fire Cache	Pat Nooney	329-4932

#### Predictive Services

<a href="#">Predictive Services</a>	Name	Phone
Meteorologist	Michael Kreyenhagen	329-4703
Meteorologist	Bruce Thoricht	329-4875
Smoke Coordinator/Fuels	Dave Grace	329-4952

## Other Agency Fire Contacts

Agency	Name	Phone
<a href="#">National Interagency Fire Center (Boise)</a>		208-387-5400
Weather Information Management System (WIMS)	Help Desk	208-387-5290
<a href="#">Bureau of Land Management</a>	Phil Gill	406-896-2914
Butte Office	John Thompson	406-533-7611
Bureau of Indian Affairs	Tom Corbin	406-247-7949
Flathead Agency	Corrie Winnie	503-231-6800
Nez Perce Tribe	Tony Harwood	406-676-2550
	Sandy Holt	208-843-2827
<a href="#">MT Department of Natural Resources and Conservation</a>	Ted Mead	406-542-4304
<a href="#">Idaho Department of Lands</a>	Brian Shiplett	208-666-8650
<a href="#">National Park Service</a>	Bryan Swift	303-969-2449
<a href="#">Glacier Park</a> FMO	Fred VanHorn	406-888-7822
<a href="#">Fish and Wildlife Service</a>	Jim Kelton	303-236-8125
Zone FMO WY, MT, UT	Bob Rebarchik	406-329-4749
National Bison Range	Kevin Beck	406-644-2211 x217
<a href="#">MT Department of Emergency Services</a>	Dan McGowan	406-841-3953

## [Western Region](#)

<a href="#">Meteorological Services Division (MSD)</a>	Name	Phone
		801-524-4000
Chief	Richard Douglas	ext. 262
Deputy	Carl Gorski	ext. 260
Fire Weather Program Manager	Roger Lamoni	ext. 267
Fire Weather Quality Control	Paul Hamilton	ext. 272

## Fire Weather Briefings

NWS Missoula offers fire weather briefings at the office, for local land managers, as well as a conference call with internet graphics for those managers at a distance.

Briefings will be held Mondays and Thursdays at 8:30 am through spring burning season. Daily briefings will be held during the active fire season, generally mid to late July through mid to late September. Briefings will return to Mondays and Thursdays for Fall Burning, generally mid to late September through October. The timing and frequency, as well as start and end dates of this service will be determined by user needs.

Briefings will include an informational package containing data such as satellite, radar, weather observations, etc. This information will be accessible to participants via NWS Missoula's internet homepage prior to each conference call.

The internet site for the Fire Weather Briefings is [www.weather.gov/missoula/fireweatherbriefing.php](http://www.weather.gov/missoula/fireweatherbriefing.php). For further information on the conference call such as toll free telephone number and pass code, please call the Missoula Weather Forecast Office at 406-329-4715 or 4840.

## Routine Product Issuance Times

### General Forecast

April - June	Morning	M-F	0700	(Weekends if needed)
July - September	Morning/Afternoon	Daily	0700/1500	
October - November	Mornings	M-F	0700	(Weekends if needed)

Specific dates of the above timeframes will be dictated by user needs.

Note: Mixing Height/Mixing Winds have been incorporated into a graphical forecast product called a Clearing Index. The Clearing Index will be produced April 1 through November 30.

## FIRE WEATHER PLANNING FORECAST EXAMPLE

ZCZC GTFFWFMSO  
FNUS55 KMSO 261254

FIRE WEATHER PLANNING FORECAST FOR WRN MONTANA AND N CNTRL IDAHO  
NATIONAL WEATHER SERVICE MISSOULA MT  
654 AM MDT TUE APR 26 2005

...HEADLINE AS NECESSARY

DISCUSSION...THIS WOULD BE A SHORT...NON-TECHNICAL DESCRIPTION OF THE WEATHER PATTERN AND FEATURES OVER THE NEXT COUPLE DAYS. IT WILL FOCUS ON THE MAIN WEATHER CONCERNS IN THE SHORT TERM.

EXTENDED...OCCASIONALLY THE DISCUSSION MAY INCLUDE INFORMATION ON THE MEDIUM RANGE (DAYS 3-7). IN THESE CASES...A SEPARATE LABELED PARAGRAPH LIKE THIS WILL BE ADDED.

IDZ102-103-MTZ109-270015-  
PALOUSE/HELLS CANYON-CLEARWATER/NEZ PERCE-BITTERROOT-

542 AM PDT TUE APR 26 2005 /642 AM MDT TUE APR 26 2005/

.TODAY...

SKY/WEATHER.....PARTLY CLOUDY (40-50 PERCENT).  
MAX TEMPERATURE.....69-79 VALLEYS AND 58-68 RIDGES.  
24 HR TREND.....UNCHANGED.  
MIN HUMIDITY.....17-27 PERCENT VALLEYS AND 26-36 PERCENT RIDGES.  
24 HR TREND.....DOWN 5 PERCENT.  
20-FOOT WINDS.....  
LOWER ELEVATION.....UPSLOPE/UPVALLEY 4-8 MPH.  
RIDGE TOP.....NORTH UP TO 5 MPH.  
HAINES INDEX.....3 VERY LOW.  
LAL.....1.  
CWR (> 0.10 INCH)...0 PERCENT.

.TONIGHT...

SKY/WEATHER.....PARTLY CLOUDY (55-65 PERCENT). SLIGHT CHANCE OF  
THUNDERSTORMS UNTIL 2400. CHANCE OF SNOW  
SHOWERS.  
MIN TEMPERATURE.....37-47 VALLEYS AND 30-40 RIDGES.  
24 HR TREND.....DOWN 10 DEGREES.  
MAX HUMIDITY.....79-89 PERCENT.  
24 HR TREND.....DOWN 10 PERCENT.  
20-FOOT WINDS.....  
LOWER ELEVATION.....NORTHEAST 5-15 MPH.  
RIDGE TOP.....NORTHEAST UP TO 10 MPH.  
HAINES INDEX.....3 VERY LOW.  
LAL.....2 UNTIL 2400...THEN 1.  
CWR (> 0.10 INCH)...10 PERCENT.

.WEDNESDAY...

SKY/WEATHER.....PARTLY CLOUDY (55-65 PERCENT). CHANCE OF  
SHOWERS.  
MAX TEMPERATURE.....52-62 VALLEYS AND 39-49 RIDGES.  
MIN HUMIDITY.....29-39 PERCENT VALLEYS AND 43-53 PERCENT RIDGES.  
20-FOOT WINDS.....  
LOWER ELEVATION.....EAST 10-20 MPH.  
RIDGE TOP.....EAST 10-20 MPH.  
HAINES INDEX.....2 VERY LOW.  
LAL.....1.  
CWR (> 0.10 INCH)...20 PERCENT.

.THURSDAY...COOLER. PARTLY CLOUDY WITH SLIGHT CHANCE OF SNOW  
SHOWERS. LOWS 29-39. HIGHS 55-65. EAST WINDS 10-20 MPH.

.FRIDAY...PARTLY CLOUDY WITH SLIGHT CHANCE OF SNOW SHOWERS. LOWS  
24-34. HIGHS 52-62. EAST WINDS UP TO 10 MPH.

.SATURDAY...SLIGHT CHANCE OF SHOWERS. PARTLY CLOUDY. LOWS 24-34.  
HIGHS 51-61. NORTHEAST WINDS 5-15 MPH.

.SUNDAY...PARTLY CLOUDY. LOWS 26-36. HIGHS 55-65.

.MONDAY...SLIGHT CHANCE OF SHOWERS. MOSTLY CLOUDY. LOWS 27-37.  
HIGHS 58-68.

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Forecast for next geographical descriptor and fire weather zone  
group.

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SHORT TERM...(Forecaster Name)

LONG TERM...(Forecaster Name)

weather.gov/missoula



## Experimental Clearing Index (CI)

The implementation of this experimental product in western Montana and north central Idaho is an effort to provide burners a more consistent method of using Mixing Height and Transport Wind information in their decision making. The Weather Service office in Missoula will provide maximum daytime CI forecasts out to three days for this area. The CI will not be provided at night as it will generally be quite low.

The [Clearing Index](#) is an Air Quality/Smoke Dispersion index that combines the affects of the Mixing Height (the maximum potential height above ground level that smoke may mix to during a designated period) and the Transport Winds (average wind within the Mixing Height). The computation of CI is as follows:

$$CI = (\text{Mixing Height}/100) \times \text{Transport Wind}$$

As an example:

Mixing Height = 8000 feet above ground level (AGL)

Transport Winds = 10 knots

$$CI = (8000/100) \times 10 = 800$$

Therefore, a higher Clearing Index indicates better smoke dispersion.

### Qualitative Adjectives:

A group representing the various land management agencies, the Montana/Idaho Airshed Group, and the Northern Rockies Predictive Services Unit has assigned qualitative smoke dispersion adjectives to CI thresholds as follows:

<b>0 - 400</b>	<b>=</b>	<b>Poor</b>
<b>400 - 650</b>	<b>=</b>	<b>Moderate</b>
<b>650 - 900</b>	<b>=</b>	<b>Good</b>
<b>&gt; 900</b>	<b>=</b>	<b>Excellent</b>

Transport winds (average wind speed and direction through the mixing height) have also been added to the clearing index graphic. Transport wind speed is factored into the clearing index but direction of smoke movement may also be helpful.

## Red Flag Criteria

One, or a combination of the following conditions, in conjunction with Very High or Extreme Fire Dangers, will be considered for Red Flag events.

1. Scattered dry thunderstorms. (A lightning storm accompanied by less than a wetting rain, 0.10 inch precipitation or less, often with very gusty winds).
2. Increased thunderstorm activity, wet or dry, during an extremely dry period.
3. A combination of low RH's and increasing strong or gusty surface winds, or abrupt increase in winds and change in direction due to the approach and passage of a cold front, squall line, or other weather phenomena other than isolated thunderstorms. See the Red Flag Decision Chart below.
4. Anytime the forecaster foresees a change in weather that would result in a significant increase in fire danger.

## Red Flag Decision Chart

Missoula's Fire Weather Forecasters utilize a Red Flag Decision Chart as a "first look" at the need for a Red Flag Warning based on increasing wind and low RH. Typically Red Flag Warnings are issued when fire danger is rated "VERY HIGH" or greater. However, there may be exceptions. This chart is by no means an absolute.

Winds are sustained 10-minute average (RAWS).

		RED FLAG DECISION CHART							
		RELATIVE HUMIDITY							
		40%	35%	30%	25%	20%	15%	10%	5%
20' WIND MPH	5	NO	NO	NO	NO	Poss	Poss	Prob	YES
	10	NO	NO	NO	Poss	Poss	Prob	YES	YES
	15	NO	NO	Poss	Poss	Prob	YES	YES	YES
	20	NO	Poss	Poss	Prob	YES	YES	YES	YES
	25	Poss	Poss	Prob	YES	YES	YES	YES	YES
	30	Poss	Prob	YES	YES	YES	YES	YES	YES

**Poss = Possible**

**Prob = Probable**

## **Forecast Zone Descriptions**

### **ZONE 102: PALOUSE/NEZ PERCE RESERVATION/HELLS CANYON REGION**

The northern boundary follows the southern portion of the Coeur d'Alene Indian Reservation and the Latah/Clearwater County lines. The eastern boundary originates at the intersection of the Little North Fork of the Clearwater (near the Clearwater County line) and the Clearwater/Nezperce National Forest boundary and runs south along the Forest boundary past Grangeville to the main Salmon River at Island Bar and continues south and west along the Idaho County border. The western boundary runs along the Snake River from the Coeur d'Alene Reservation to the Adams County line.

### **ZONE 103: CLEARWATER/NEZ PERCE NATIONAL FOREST**

This zone encompasses the entire combined Clearwater and Nezperce National Forests as well as the Gospel Hump and portions of the Selway Bitterroot Wilderness. Also included is the Floodwood State Forest in the vicinity of the Little North Fork of the Clearwater at the northern border of Clearwater County.

### **ZONE 104: KOOTENAI NATIONAL FOREST/TALLEY LAKE DISTRICT**

The western and northern boundaries follow political lines along the Idaho-Montana and Canadian borders. The eastern boundary follows the Kootenai National Forest boundary south to route 93 to the Flathead National Forest boundary, north of Whitefish, east of Columbia Falls and heading south along the Forest boundary to the Lake County line. The southern boundary follows the Lake County line and Flathead National Forest boundary to the intersection of route 2 which continues south along Forest boundaries to the State border. The State protected lands on the Fisher River District are also included within this zone.

### **ZONE 105: FLATHEAD NATIONAL FOREST/GLACIER PARK/BOB MARSHALL AND MISSION MOUNTAIN WILDERNESS**

This zone starts at the intersection of the Kootenai/Flathead National Forests at the Canadian border running east and including Glacier National Park. The eastern boundary follows the Park border and intersects with the Continental Divide and runs south to the Flathead National Forest boundary. The southern boundary borders the Bob Marshall and Mission Mountain Wilderness lines. The western boundary follows the Mission Mountains and Swan range along the Forest boundary to north of Whitefish and west to route 93 to the Kootenai/Flathead National Forest boundary. This zone includes the Stillwater State Forest.

### **ZONE 106: WESTERN LOLO NATIONAL FOREST**

This zone includes the Nine Mile, Superior, Plains/Thompson Falls and western portions of the Missoula District on the Lolo National Forest. It is bounded by the Idaho-Montana border (Bitterroot Mountains) and extends northeast along the Kootenai/Lolo National Forest boundary. Moving south, this zone follows the Salish & Kootenai Indian Reservation and Lolo National Forest interface to west of Evaro tracing the Forest boundary to Huson. Crossing I-90, this zone continues south along the Forest boundary until the intersection of route 12 and continues southwestward to the State border.

### **ZONE 107: SALISH & KOOTENAI INDIAN RESERVATION**

This zone is bounded by the Lolo National Forest on the west and south and the Flathead National Forest on the east and north.

### **ZONE 108: EASTERN LOLO NATIONAL FOREST /WELCOME CREEK AND SCAPEGOAT WILDERNESSES**

This zone includes all of the Lolo National Forest east of Missoula and south of route 12, bounded by the Bitterroot National Forest. It also contains the Scapegoat and most of the Welcome Creek Wildernesses. The eastern boundary starts at the tri-section of the Bob Marshall Wilderness, Continental Divide and Scapegoat Wilderness and continues southeast to the Wilderness/Lincoln District boundary. This line continues south along the Helena National Forest boundary to the intersection with the Deerlodge/Beaverhead National Forest. The southern boundary runs west from this boundary to Deer Lodge then north along Interstate 90 to the intersection with the Philipsburg District line. State protection areas include Missoula, Clearwater, Garrison, and Anaconda.

### **ZONE 109: BITTERROOT NATIONAL FOREST**

This zone includes the entire Bitterroot National Forest (in both Idaho and Montana) as well as the Frank Church River of No Return Wilderness and portions of the Selway-Bitterroot Wilderness. The Stevensville District represents the northern boundary for this zone which is approximately along the Ravalli County line.

### **ZONE 110: DEERLODGE/ WESTERN BEAVERHEAD NATIONAL FOREST**

The western boundary runs between Lemhi Pass northward along the Idaho-Montana border to the intersection of

the Ravalli and Beaverhead County lines. This boundary continues along the Forest boundary via the Anaconda-Pintlar range and Sapphire Divide past Skalkaho Pass and across Rock Creek into the Welcome Creek Wilderness. This boundary cuts north across the John Long Mountains and intersects with Interstate 90. This zone includes the eastern-most section of this wilderness area (Lolo National Forest) which is managed by the Philipsburg District. The northern border follows Interstate 90 to Deerlodge, cuts east and runs along the Forest boundary, across the divide, and intersects with Interstate 15. The eastern boundary runs southerly and follows Interstate 15 through Butte and Dillon then along Route 41 to Clark Canyon Reservoir. The southern boundary extends west along Horse Prairie Creek to Lemhi Pass.

#### **ZONE 111: EASTERN BEAVERHEAD NATIONAL FOREST**

The southern boundary follows the Idaho-Montana border from Lemhi Pass along the Continental Divide (Centennial Mountains included) to Reynolds Pass. The eastern zone line continues along the Beaverhead/Gallatin National Forest boundary to north of Ennis where the Gallatin boundary intersects the Madison County line. The zone then follows the Madison County line to east of Whitehall and along the Deerlodge/Helena Forest boundary until Interstate 15 is intersected. The west boundary is identical to the east boundary of the Deerlodge/western Beaverhead National Forest zone.

## Weather Stations

Zone	Station	WIMS #	County	Lat	Long	Elev	Site	Aspect
102	<a href="#">Potlatch</a>	100603	Latah	46:98	116:98	2500	Valley	Flat
102	<a href="#">Dent</a>	100714	Clearwater	46:62	116:22	1700	Valley	N-E
102	<a href="#">Pierce</a>	100711	Clearwater	46:50	115:83	3085	Valley	Flat
102	<a href="#">Slate Creek</a>	101037	Idaho	45:63	116:28	1568	Valley	W
102	<a href="#">Pittsburg Lndg</a>	101100	Idaho	45:63	116:46	1357		
102	<a href="#">Shock</a>	100606	Latah	46:98	116:63	3700	Slope	S
102	<a href="#">Rudo</a>	109796	Clearwater	46:50	115:99	2386		
103	<a href="#">Kelly Creek</a>	100708	Clearwater	46:66	115:16	2737	Valley	NE-SW
103	<a href="#">Eagle</a>		Clearwater	46:80	115:54	5700		
103	<a href="#">Powell</a>	101031	Idaho	46:51	114:69	3409	Valley	W-E
103	<a href="#">Fenn</a>	101013	Idaho	46:06	115:53	1520	Valley	NW-SE
109	<a href="#">Hells Half Sadl</a>	101019	Ravalli	45:65	114:63	8100		
103	<a href="#">Moose Creek</a>	101028	Idaho	46:07	114:55	2460	Valley	NW-SE
103	<a href="#">Red River</a>	101045	Idaho	45:71	115:33	4600	Slope	S
103	<a href="#">Tess Portable</a>	100791	Idaho	45:60	116:13	4700	Valley	Flat
103	<a href="#">Roundtop</a>	101049	Idaho	46:58	114:50	6500	Ridge	S
104	<a href="#">Libby</a>	240107	Lincoln	48:38	115:57	2070	Valley	Flat
104	<a href="#">Eureka</a>	240110	Lincoln	48:90	115:02	2800	Valley	Flat
104	<a href="#">Troy</a>	240112	Lincoln	48:47	115:92	1950	Valley	Flat
104	<a href="#">BC Baldy</a>	240119	Lincoln	48:63	115:58	4300	Slope	SW
104	<a href="#">Trout Creek</a>	241210	Sanders	47:87	115:62	2350	Valley	Flat
104	<a href="#">Boorman</a>		Flathead	48:13	114:72	3963		
104	<a href="#">Yaak Up Ford</a>	240120	Lincoln	48:92	115:66	3000		
105	<a href="#">Spotted Br RS</a>	240214	Flathead	47:92	113:52	3725	Valley	S
105	<a href="#">Hungry Horse</a>	240217	Flathead	48:38	114:06	3225	Valley	S
105	<a href="#">Cyclone</a>	240223	Flathead	48:72	114:34	5300	Ridge	
105	<a href="#">Condon WC</a>	241502	Missoula	47:54	113:72	3684	Valley	S
105	<a href="#">Fielding</a>	240225	Flathead	48:28	113:44	4599	Valley	Flat
105	<a href="#">Spotted Bear 2</a>	240213	Flathead	47:90	113:43	7225	Ridge	
105	<a href="#">Deep Creek</a>	240308	Glacier	48:36	113:12	5431	Ridge	S
105	<a href="#">St. Mary</a>	240303	Glacier	48:73	113:43	4560		
105	<a href="#">West Glacier</a>	240207	Flathead	48:51	113:99	3200	Valley	NE-SW
105	<a href="#">Polebridge</a>	240210	Flathead	48:78	114:28	3500	Valley	NW-SE
105	<a href="#">Belly River</a>	240301	Glacier	48:93	113:71	4700	Valley	N-S
105	<a href="#">Stillwater</a>	240221	Flathead	48:54	114:56	3116	Valley	NW-S
106	<a href="#">Lolo Portable 1</a>	241599	Mineral	47:93	114:04	6080		
106	<a href="#">Thompson F</a>	241209	Sanders	47:58	115:28	2460	Valley	S
106	<a href="#">St. Regis</a>	241302	Mineral	47:31	115:11	2680	Valley	S
106	<a href="#">Nine Mile</a>	241507	Missoula	47:07	114:40	3300	Valley	SW
106	<a href="#">Pardee</a>	241308	Mineral	47:27	114:92	4640	Slope	SW

Zone	Station	WIMS #	County	Lat	Long	Elev	Site	Aspect
106	<a href="#">Plains 1</a>	241206	Sanders	47:72	115:27	2510	Valley	S
107	<a href="#">Hot Springs</a>	241211	Sanders	47:61	114:66	2960	Valley	N-S
107	<a href="#">Jette</a>	241404	Lake	47:76	114:23	3600	Valley	Flat
107	Ronan	241403	Lake	47:88	11:417	3061	Valley	Flat
108	<a href="#">Seeley Lake</a>	241508	Missoula	47:18	113:45	4235	Valley	Flat
108	<a href="#">Missoula</a>	241513	Missoula	46:85	114:05	3200	Valley	Flat
108	<a href="#">Stinkwater</a>	241518	Missoula	46:85	113:39	5428	Ridge	
108	<a href="#">Point Six</a>	241519	Missoula	47:04	113:98	7400	Ridge	
109	<a href="#">Deer Mtn</a>	242902	Ravalli	46:03	114:06	7283	Ridge	S
109	<a href="#">Gird Point</a>	242911	Ravalli	46:19	113:92	6950	Ridge	W
109	<a href="#">West Fork</a>	242907	Ravalli	45:82	114:26	5200	Ridge	SW
109	<a href="#">Tepee Point</a>	242910	Ravalli	45:93	113:74	6629		
109	<a href="#">Stevensville</a>	242904	Ravalli	46:51	114:09	3365	Valley	N-S
109	<a href="#">Little Rock Cr</a>	242916	Ravalli	46:04	114:26	5507	M-Slp	E
109	<a href="#">Smith Creek</a>	242912	Ravalli	46:44	114:23	5650	Ridge	SE
109	<a href="#">Coyote Mdw</a>	242991	Ravalli	46:45	113:89	5200		E
109	<a href="#">SawMill Cr</a>	242902	Ravalli	46:03	114:06	7282	Ridge	
110	<a href="#">Phillipsburg</a>	243002	Granite	46:32	113:30	5280	Valley	Flat
110	<a href="#">Wise River</a>	245405	Beaverhead	45:78	112:93	5704	Valley	W-E-S
111	<a href="#">Brenner</a>	245409	Beaverhead	44:96	113:21	6350	Valley	Flat
111	<a href="#">Red Rock</a>	245410	Beaverhead	44:68	111:83	6690	Valley	W-E
111	<a href="#">Antelope</a>	245412	Beaverhead	44:68	112:54	6795	Valley	W-E
111	<a href="#">Ennis</a>	245501	Madison	45:12	111:26	4939	Valley	N-S
111	<a href="#">Whitehall</a>	243204	Jefferson	45:53	112:09	4360	Valley	Flat
111	<a href="#">Galena</a>	243206	Jefferson	46:22	112:22	6860	Ridge	
	<a href="#">FireLab Ptbl</a>			46.64	114.85	7318		

## Fire Weather District

The Missoula Fire Weather District includes zones 102 through 111 in north-central Idaho and western Montana. See map below.

